

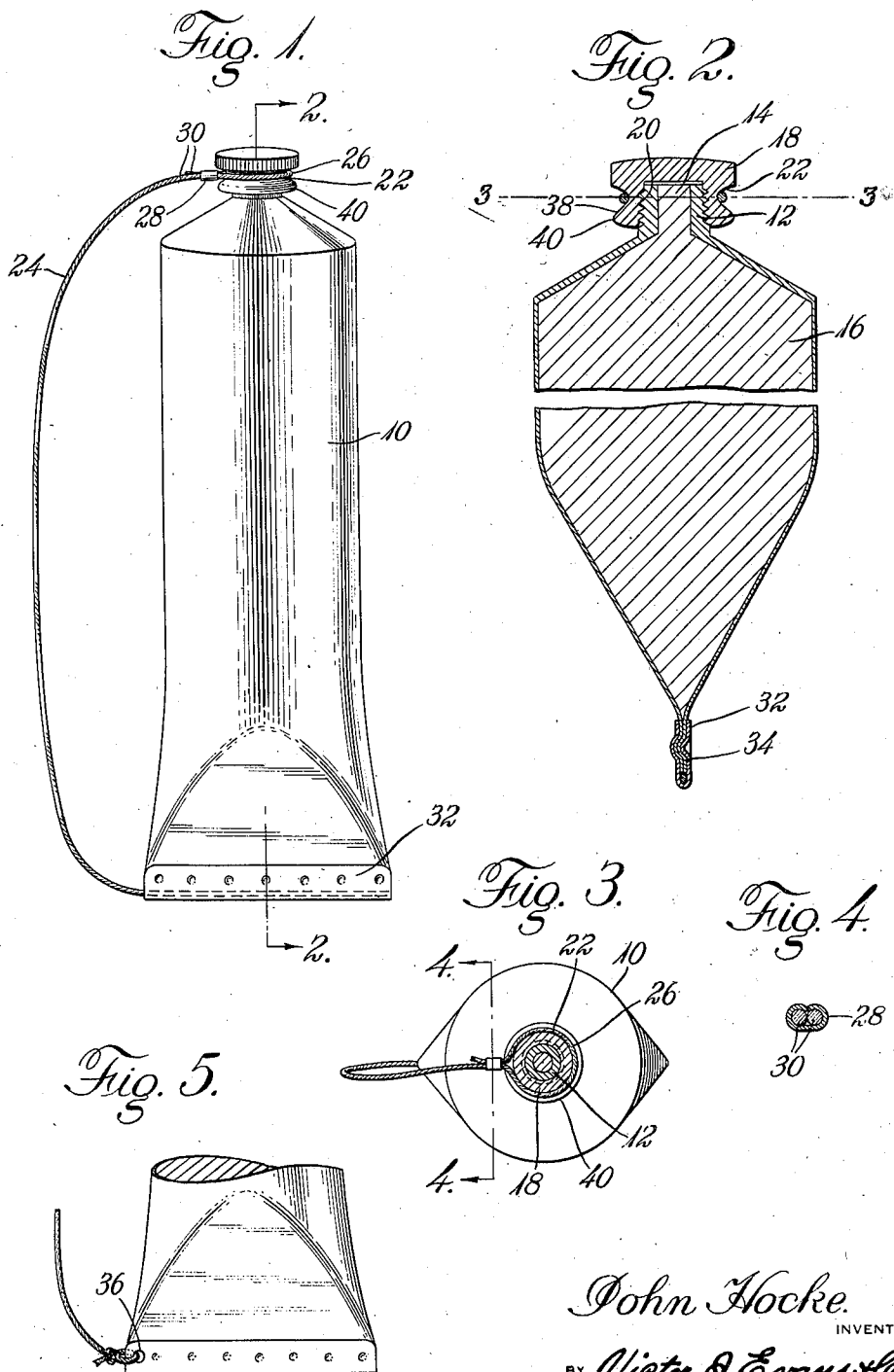
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CAP RETAINER

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CAP RETAINER

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1 Claim. (Cl. 221—60)

My invention relates to dispensing tubes of the nature employed in merchandising shaving cream, tooth paste, and the like, and includes among its objects and advantages the provision of an improved cap retainer.

An object of my invention is to provide retaining means for a screw cap associated with the tube for closing purposes and in which the retainer and cap are so related as to facilitate manipulation of the cap in addition to maintaining the cap in tied relation to the tube to prevent accidental loss thereof.

In the accompanying drawing:

Fig. 1 is an elevational view of a collapsible tube embodying my invention;

Fig. 2 is a sectional view along the line 2—2 of Fig. 1;

Fig. 3 is a sectional view along the line 3—3 of Fig. 2;

Fig. 4 is a sectional view along the line 4—4 of Fig. 3; and

Fig. 5 is a fragmentary view of a tube showing a different form of connection.

In the embodiment selected to illustrate my invention, I make use of a collapsible tube 10 which may be of conventional design. The tube includes a threaded neck 12 including a bore 14 through which the material 16 may be extruded. I provide a cap 18 having a threaded bore 20 for connection with the neck 12.

The cap 18 is provided with a circumferential groove 22. Within the groove 22 I connect a tie string 24, which string includes a loop 26 embracing the cap within the groove. The loop is formed by bending the string back upon itself and connecting the two reaches 30 by a metallic clip 28. Fig. 4 illustrates the clip 28 which originally comprises a flat piece of metal bent back

about the two string reaches 30 and pressed into clamping relation therewith.

The opposite end of the string 24 may be anchored within the closure channel 32 which is pinched on the flattened end 34 of the tube, Fig. 5 illustrates an alternative anchorage in which the tube and the channel 32 are bored at 36 for the reception of the string.

Loop 26 fits sufficiently tight about the grooved part of the cap to prevent disconnection of the two parts, but the loop fits sufficiently loose to permit the cap to be rotated easily. Groove 22 is flared at 38 and rounded as at 40 to provide a gentle curvature and a configuration which offers little resistance to turning of the cap so far as the loop is concerned.

The string 24 is of sufficient length to permit the fingers to be passed between the string and the tube in the original condition of the tube. The string offers no resistance to rolling of the flattened end. It will thus be seen that I have provided means whereby the cap is at all times tied to the tube.

Without further elaboration, the foregoing will so fully explain my invention that others may, by applying current knowledge, readily adapt the same for use under various conditions of service.

I claim:

In combination with a collapsible tube having a threaded neck at one end and the opposite end flattened, a cap having threaded relation with the neck for closing the same, a flexible tie element having one end swivelly connected with said cap, the opposite end of said tie member being connected with the flattened end and projecting from one edge of said flattened end.

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